CW#11: Angle Addition Postulate

Geometry

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

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| **CRS** | PPF 402 Exhibit knowledge of basic angle properties and special sums of angle measure (e.g., 90, 180 and 360) |
| **Objective** | 2.5 Use the angle addition postulate  2.6 Use the angle addition postulate for bisecting angles |

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| **Segment Addition Postulate**  Make a statement using segments AB, BC, and AC that demonstrates the segment addition postulate.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Angle Addition Postulate**  Make a statement using RSP, PST, and RST that demonstrates the angle addition postulate.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Angle Bisector**  An \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a ray that the divides an angle into \_\_\_\_\_\_\_\_\_ angles that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Make a statement using XYW and WYZ.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Steps to finding a missing angle using the Segment Addition Postulate or angle bisector:

**Step 1:**  Set up an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ based on the information given in the diagram.



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\_\_\_\_\_\_ + \_\_\_\_\_\_ = \_\_\_\_\_\_ **OR** \_\_\_\_\_ = \_\_\_\_\_

**Step 2:** If the angle measures are given as ­­­­­­­­­­­­algebraic equations, solve for the unknown \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Step 3:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the angle the problem is asking you to solve for.

**Step 4:** \_\_\_\_\_\_\_\_\_\_\_\_!

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| Example 1:  *m*∠*PRS* = \_\_?\_\_ | Example 3, p. 26 |
| You Try 1:  *m*∠*EFG* = \_\_?\_\_ | You Try 2:  Given *m*∠*ADC* = 135°, find *m*∠*BDC.* |
| NOTE: Sometimes we will have to recognize the value of the sum of the two angles on our own.  Guided Practice, p. 26 | |
| 3. | 4. |

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| Practice p. 29 | | |
| 22. | 23. | 24. |
| 25. | 26. | 27. |

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| Example 5, p. 28 | Example 2:  ***BD***  bisects ∠*ABC*  Find m∠*ABC* |
| You Try 1:  *XZ* bisects ∠*WXY*   1. Find ∠*ZXY* 2. Find ∠*WXY* | You Try 2:  ***BD***  bisects ∠*ABC*  Find m∠*ABC* |

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| Practice p. 30 | | |
| 29. | 30. | 31. |
| 40. | 41. | 42. |

EXIT SLIP (w/ Ans)

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| 1) Given *m*∠*ADC* = 135°, find *m*∠*BDC.* | 2) bisects ∠*ABC*  Find m∠*ABC* |

EXIT SLIP

|  |  |
| --- | --- |
| 1) Given *m*∠*ADC* = 135°, find *m*∠*BDC.* | 2) bisects ∠*ABC*  Find m∠*ABC* |